

1. Solve the equation below. Then, choose the interval that contains the solution.

$$-9(3x + 11) = -5(17x + 8)$$

- A. $x \in [-2.21, -0.44]$
 - B. $x \in [-3.27, -2.12]$
 - C. $x \in [2.39, 2.83]$
 - D. $x \in [0.73, 2.04]$
 - E. There are no real solutions.
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2. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $6x - 7y = 6$ and passing through the point $(-5, 4)$.

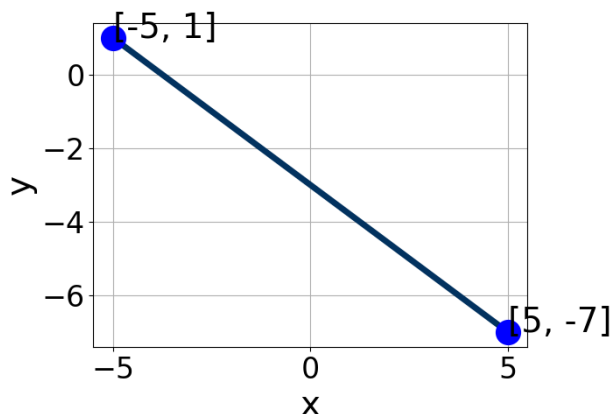
- A. $m \in [-2.54, -0.89]$ $b \in [8.92, 9.19]$
 - B. $m \in [-2.54, -0.89]$ $b \in [1.36, 2.36]$
 - C. $m \in [-2.54, -0.89]$ $b \in [-2.49, -1.7]$
 - D. $m \in [0.1, 2.72]$ $b \in [9.7, 10.7]$
 - E. $m \in [-0.93, -0.21]$ $b \in [-2.49, -1.7]$
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3. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $8x - 5y = 6$ and passing through the point $(7, -9)$.

- A. $m \in [0.59, 0.76]$ $b \in [-14.38, -10.38]$
- B. $m \in [-0.9, -0.3]$ $b \in [-20, -14]$
- C. $m \in [-0.9, -0.3]$ $b \in [-8.62, -3.62]$
- D. $m \in [-0.9, -0.3]$ $b \in [1.62, 9.62]$
- E. $m \in [-1.83, -0.92]$ $b \in [-8.62, -3.62]$

4. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [1.8, 6.1]$, $B \in [5, 10]$, and $C \in [-17, -7]$
- B. $A \in [-1.9, 2.9]$, $B \in [1, 3]$, and $C \in [-3, -1]$
- C. $A \in [-1.9, 2.9]$, $B \in [-3, 0]$, and $C \in [1, 6]$
- D. $A \in [1.8, 6.1]$, $B \in [-9, -4]$, and $C \in [10, 18]$
- E. $A \in [-4.1, -2.3]$, $B \in [-9, -4]$, and $C \in [10, 18]$

5. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x + 6}{3} - \frac{7x + 7}{2} = \frac{-7x - 3}{8}$$

- A. $x \in [-1.7, -0.1]$
- B. $x \in [1, 2.1]$
- C. $x \in [0.1, 0.6]$
- D. $x \in [3.8, 5.3]$
- E. There are no real solutions.

6. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals

that contain m and b .

$$(-4, -9) \text{ and } (-6, 11)$$

A. $m \in [-11, -7]$ $b \in [-59, -45]$

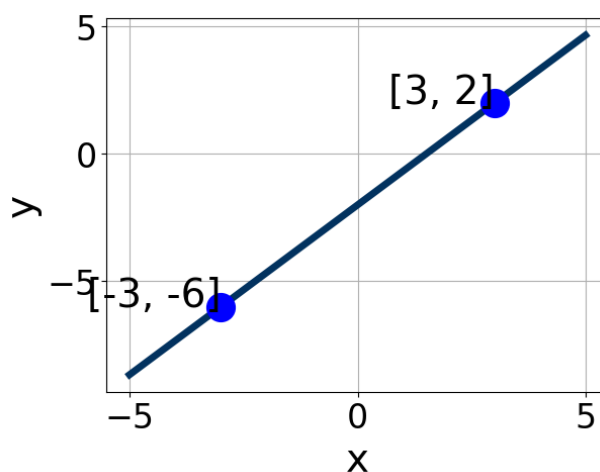
B. $m \in [-11, -7]$ $b \in [-8, 2]$

C. $m \in [-11, -7]$ $b \in [48, 58]$

D. $m \in [9, 16]$ $b \in [69, 76]$

E. $m \in [-11, -7]$ $b \in [15, 23]$

7. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



A. $A \in [-2.8, 0.3]$, $B \in [-1.56, -0.72]$, and $C \in [1.9, 5.3]$

B. $A \in [-2.8, 0.3]$, $B \in [-0.23, 1.48]$, and $C \in [-4.6, -0.6]$

C. $A \in [-5.5, -1.4]$, $B \in [1.28, 4.39]$, and $C \in [-7.8, -5.5]$

D. $A \in [1.5, 5.9]$, $B \in [-4.02, -2.82]$, and $C \in [5.5, 8.2]$

E. $A \in [1.5, 5.9]$, $B \in [1.28, 4.39]$, and $C \in [-7.8, -5.5]$

8. Solve the equation below. Then, choose the interval that contains the solution.

$$-18(3x + 7) = -17(10x + 13)$$

- A. $x \in [-3.46, -2.92]$
- B. $x \in [-1.84, -0.97]$
- C. $x \in [-1.35, -0.48]$
- D. $x \in [2.86, 3.64]$
- E. There are no real solutions.

9. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(-3, -4) \text{ and } (4, 6)$$

- A. $m \in [1.1, 4.2]$ $b \in [-1.52, -0.75]$
- B. $m \in [1.1, 4.2]$ $b \in [-0.47, -0.2]$
- C. $m \in [1.1, 4.2]$ $b \in [1.45, 2.09]$
- D. $m \in [-4.7, 1.2]$ $b \in [11.62, 11.75]$
- E. $m \in [1.1, 4.2]$ $b \in [0, 0.79]$

10. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-3x + 5}{3} - \frac{8x + 8}{7} = \frac{-5x + 7}{4}$$

- A. $x \in [-0.5, 0.1]$
- B. $x \in [-11.5, -10.9]$
- C. $x \in [0.9, 1.9]$
- D. $x \in [-3.1, -1]$
- E. There are no real solutions.

11. Solve the equation below. Then, choose the interval that contains the solution.

$$-5(-12x - 6) = -15(14x - 4)$$

- A. $x \in [-0.38, -0.32]$
 - B. $x \in [0.5, 1.22]$
 - C. $x \in [0.25, 0.44]$
 - D. $x \in [-0.08, 0.22]$
 - E. There are no real solutions.
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12. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $3x - 7y = 6$ and passing through the point $(-4, -4)$.

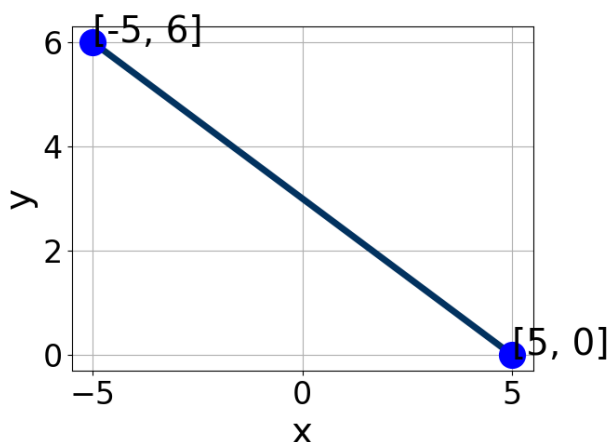
- A. $m \in [-2.6, -1.6]$ $b \in [-18.33, -11.33]$
 - B. $m \in [1.4, 3.4]$ $b \in [4.33, 13.33]$
 - C. $m \in [-1.3, 0.6]$ $b \in [-18.33, -11.33]$
 - D. $m \in [-2.6, -1.6]$ $b \in [-3, 3]$
 - E. $m \in [-2.6, -1.6]$ $b \in [9.33, 15.33]$
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13. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $5x + 7y = 11$ and passing through the point $(-8, -5)$.

- A. $m \in [0.26, 1.53]$ $b \in [-1.3, 2.8]$
- B. $m \in [-2.29, -0.89]$ $b \in [-13.3, -9.8]$
- C. $m \in [-0.83, -0.61]$ $b \in [9.8, 10.9]$
- D. $m \in [-0.83, -0.61]$ $b \in [1.3, 3.8]$
- E. $m \in [-0.83, -0.61]$ $b \in [-13.3, -9.8]$

14. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [1.1, 6.7]$, $B \in [4, 8]$, and $C \in [14, 21]$
- B. $A \in [0.4, 0.8]$, $B \in [1, 3]$, and $C \in [3, 6]$
- C. $A \in [1.1, 6.7]$, $B \in [-8, -4]$, and $C \in [-16, -13]$
- D. $A \in [-5.2, 0.2]$, $B \in [-8, -4]$, and $C \in [-16, -13]$
- E. $A \in [0.4, 0.8]$, $B \in [-4, 0]$, and $C \in [-3, -2]$

15. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{7x - 8}{5} - \frac{-4x - 7}{3} = \frac{6x - 9}{4}$$

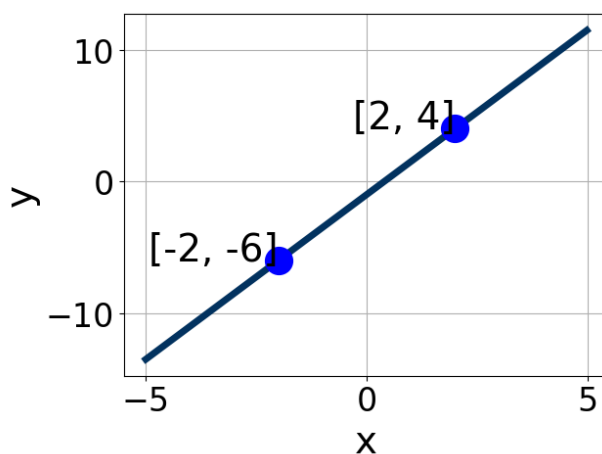
- A. $x \in [-0.5, 2.8]$
- B. $x \in [-8.1, -5.8]$
- C. $x \in [-1.1, 1.1]$
- D. $x \in [-3.4, -1]$
- E. There are no real solutions.

16. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(-4, -6) \text{ and } (8, -11)$$

- A. $m \in [-2.9, 0.3]$ $b \in [-3.5, 0.2]$
- B. $m \in [-2.9, 0.3]$ $b \in [6.7, 8.3]$
- C. $m \in [-0.4, 1]$ $b \in [-17, -13.7]$
- D. $m \in [-2.9, 0.3]$ $b \in [-22.3, -17]$
- E. $m \in [-2.9, 0.3]$ $b \in [-8.4, -6.1]$

17. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [1.2, 7.5]$, $B \in [-2.09, -1.98]$, and $C \in [1.77, 2.7]$
- B. $A \in [-8.3, -4.3]$, $B \in [1.68, 2.11]$, and $C \in [-2.34, -1.66]$
- C. $A \in [-3.3, -2]$, $B \in [0.56, 1.64]$, and $C \in [-1.47, 0.03]$
- D. $A \in [1.2, 7.5]$, $B \in [1.68, 2.11]$, and $C \in [-2.34, -1.66]$
- E. $A \in [-3.3, -2]$, $B \in [-1.39, -0.82]$, and $C \in [0.25, 1.12]$

18. Solve the equation below. Then, choose the interval that contains the solution.

$$-15(-9x - 12) = -4(-18x - 17)$$

- A. $x \in [3.66, 4.21]$
 - B. $x \in [-4.56, -3.75]$
 - C. $x \in [-2.55, -1.28]$
 - D. $x \in [-1.65, 0.08]$
 - E. There are no real solutions.
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19. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(11, 2) \text{ and } (9, -11)$$

- A. $m \in [4.5, 8.5]$ $b \in [-74.5, -67.5]$
 - B. $m \in [-14.5, -4.5]$ $b \in [46.5, 50.5]$
 - C. $m \in [4.5, 8.5]$ $b \in [-15, -6]$
 - D. $m \in [4.5, 8.5]$ $b \in [-20, -17]$
 - E. $m \in [4.5, 8.5]$ $b \in [65.5, 71.5]$
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20. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-5x + 4}{7} - \frac{6x - 3}{5} = \frac{-7x - 4}{4}$$

- A. $x \in [11.22, 16.22]$
- B. $x \in [65.96, 67.96]$
- C. $x \in [4.91, 8.91]$
- D. $x \in [0.54, 1.54]$
- E. There are no real solutions.

21. Solve the equation below. Then, choose the interval that contains the solution.

$$-17(-12x + 3) = -18(7x - 14)$$

- A. $x \in [-1.29, -0.35]$
 - B. $x \in [0.2, 0.65]$
 - C. $x \in [-3.56, -1.75]$
 - D. $x \in [0.83, 1.17]$
 - E. There are no real solutions.
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22. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Parallel to $3x - 4y = 12$ and passing through the point $(6, 9)$.

- A. $m \in [0.67, 1.16]$ $b \in [4.47, 5.43]$
 - B. $m \in [1.31, 1.56]$ $b \in [4.47, 5.43]$
 - C. $m \in [-0.91, -0.16]$ $b \in [12.68, 13.77]$
 - D. $m \in [0.67, 1.16]$ $b \in [-5.48, -3.1]$
 - E. $m \in [0.67, 1.16]$ $b \in [2.96, 3.8]$
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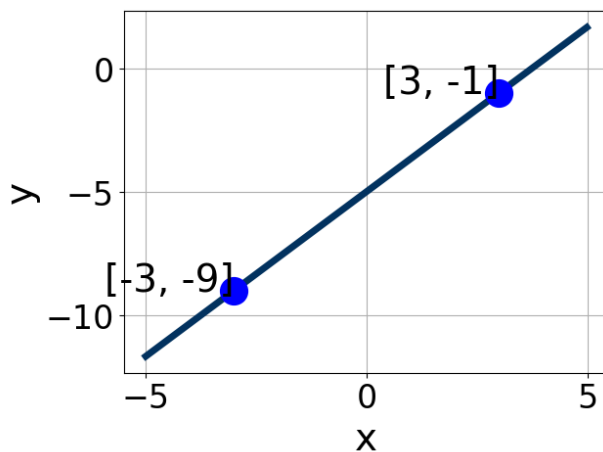
23. Find the equation of the line described below. Write the linear equation in the form $y = mx + b$ and choose the intervals that contain m and b .

Perpendicular to $6x - 7y = 7$ and passing through the point $(-6, -8)$.

- A. $m \in [-0.99, -0.1]$ $b \in [-15.17, -14.25]$
- B. $m \in [-1.91, -1.14]$ $b \in [-15.17, -14.25]$
- C. $m \in [-1.91, -1.14]$ $b \in [-4.17, -1.8]$
- D. $m \in [0.93, 1.7]$ $b \in [-1.39, -0.24]$

E. $m \in [-1.91, -1.14]$ $b \in [14.93, 15.47]$

24. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [-2.9, -0.3]$, $B \in [0.01, 1.56]$, and $C \in [-6, -2]$
 B. $A \in [-7, -1.8]$, $B \in [2.87, 3.77]$, and $C \in [-16, -6]$
 C. $A \in [0, 4.8]$, $B \in [2.87, 3.77]$, and $C \in [-16, -6]$
 D. $A \in [0, 4.8]$, $B \in [-3.02, -2.9]$, and $C \in [10, 20]$
 E. $A \in [-2.9, -0.3]$, $B \in [-1.54, -0.99]$, and $C \in [4, 11]$

25. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-8x + 7}{4} - \frac{-5x + 3}{7} = \frac{-6x - 5}{8}$$

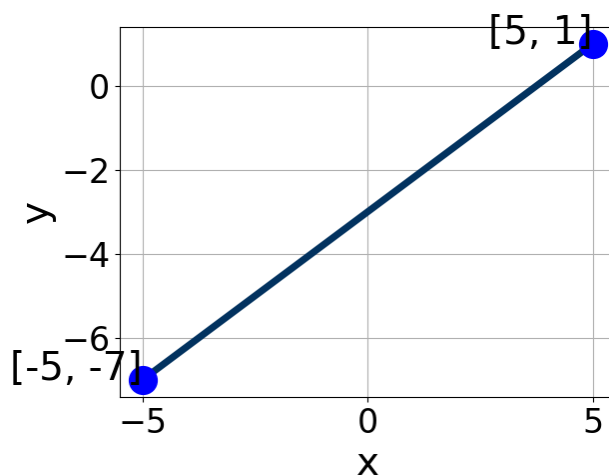
- A. $x \in [-0.65, 0.35]$
 B. $x \in [14.8, 21.8]$
 C. $x \in [3.63, 4.63]$
 D. $x \in [4.23, 6.23]$
 E. There are no real solutions.

26. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$(9, 5)$ and $(-11, -8)$

- A. $m \in [-0.1, 2.1]$ $b \in [0.2, 0.9]$
- B. $m \in [-0.1, 2.1]$ $b \in [1, 5.7]$
- C. $m \in [-1.4, 0.2]$ $b \in [-17.6, -13.7]$
- D. $m \in [-0.1, 2.1]$ $b \in [-1.3, 0.7]$
- E. $m \in [-0.1, 2.1]$ $b \in [-4.3, -2.4]$

27. Write the equation of the line in the graph below in Standard Form $Ax + By = C$. Then, choose the intervals that contain A , B , and C .



- A. $A \in [3.8, 4.4]$, $B \in [2.3, 8.6]$, and $C \in [-16, -8]$
- B. $A \in [-3, 0.6]$, $B \in [-1.8, -0.4]$, and $C \in [1, 4]$
- C. $A \in [-3, 0.6]$, $B \in [-0.4, 2.2]$, and $C \in [-6, -1]$
- D. $A \in [-5.7, -3.3]$, $B \in [2.3, 8.6]$, and $C \in [-16, -8]$
- E. $A \in [3.8, 4.4]$, $B \in [-5.3, -3.5]$, and $C \in [13, 20]$

28. Solve the equation below. Then, choose the interval that contains the solution.

$$-10(8x + 5) = -14(7x + 9)$$

- A. $x \in [-5.22, -2.22]$
 - B. $x \in [5.78, 10.78]$
 - C. $x \in [-0.99, 3.01]$
 - D. $x \in [-9.78, -6.78]$
 - E. There are no real solutions.
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29. First, find the equation of the line containing the two points below. Then, write the equation in the form $y = mx + b$ and choose the intervals that contain m and b .

$$(11, 4) \text{ and } (7, -11)$$

- A. $m \in [3.75, 8.75]$ $b \in [-42.25, -33.25]$
 - B. $m \in [-8.75, -1.75]$ $b \in [7.25, 21.25]$
 - C. $m \in [3.75, 8.75]$ $b \in [-12, 0]$
 - D. $m \in [3.75, 8.75]$ $b \in [33.25, 42.25]$
 - E. $m \in [3.75, 8.75]$ $b \in [-23, -16]$
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30. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 9}{7} - \frac{7x - 9}{4} = \frac{-4x - 5}{6}$$

- A. $x \in [-8.28, -2.28]$
- B. $x \in [1.51, 5.51]$
- C. $x \in [-3.8, -0.8]$
- D. $x \in [8.77, 10.77]$
- E. There are no real solutions.

